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EXAMINER	
UHLIR, NIKOLAS J	

ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 04/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary	Application No.	Applicant(s)	
	09/926,609	MESSERE ET AL.	
	Examiner	Art Unit	
	Nikolas J. Uhlir	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3, 5-8, 10-12, 14, 18-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 5-8, 10-12, 14, 18-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response the arguments dated 1/30/2004. Currently, claims 1-3. 5-8, 10-12, 14, 18-26 are pending.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1-3, 6-8, 10, 19-23 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholz et al. (US5753373).

4. This rejection is maintained as set forth in the prior office action dated 12/08/2003.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scholz et al. as applied to claim 1 above, and further in view of Creasy et al. (US5262475).

6. This rejection is maintained as set forth in the prior office action dated 12/08/2003.

7. Claims 1, 11-12, 14, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Florentin et al. (US6052965) in view of Scholz et al.

8. This rejection is maintained as set forth in the prior office action dated 12/08/2003.

9. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scholz as applied to claim 10 above, and further in view of Hatekeyama et al. (US6394613).

10. This rejection is maintained as set forth in the prior office action dated 12/08/2003.

11. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scholz as applied to claim 3 above, and further in view of Hayakawa Rubber Co. (JP05-222227).

12. This rejection is maintained as set forth in the prior office action dated 12/08/2003.

Response to Arguments

13. Applicant's arguments filed 1/30/2004 have been fully considered but they are not persuasive. In the instant case the applicant presented the following arguments (summarized):

Relating to US5753373 to Scholz

1) There is no requirement in the Scholz reference that the coating be porous and Scholz does not disclose the pore size required by claim 1. Thus the limitations of claim 1 cannot be met.

2) Even if the coating of Scholz were porous, it is not understood how the pore size could even possibly be within the claimed range given the fact that the film of Scholz is substantially thinner (i.e. 0.05-0.25μ) then the required mean pore diameter (1-15μ).

3) The examiner has glossed over the fact that the claimed absorbent material, not just the adsorbent layer as a whole, must be porous. Inorganic metal oxides, such as those utilized by Scholz, are not inherently porous.

4) The use of Titanium oxide in Scholz, even if construed to be TiO_2, does not connote mesoporous TiO_2, as required by the instant claim 22.

5) Regarding claim 20, Scholz does not disclose a combination of polymer binders, i.e. polyurethane and polyvinylpyrrolidone. The examiners characterization of the block copolymer surfactants as equivalent to the recited polymer binder is erroneous as the surfactant and binder of Scholz are mutually exclusive.

6) Regarding claim 23, this material is necessarily inorganic, thus the tetraethoxy orthosilicate of Scholz is different than that of the claimed orthosilicate condensation product.

7) With regard to claim 26, Scholz is directed towards an antifogging film for use at high temperature and high humidity (as shown by column 1, lines 59-61) and thus is not suggestive of a film that is suitable for use at low temperature as required by the instant claims.

Relating to Scholz in view of US5262475 to Creasy

8) One of ordinary skill in the art would not be motivated to crosslink the polymer binder of Scholz per the teachings of Creasy as Creasy requires both PVP and PVA to work and is considered to be highly unique in that it utilizes all hydrophilic materials.

Relating to US6052965 (Florentin) in view of Scholz

9) One of ordinary skill in the art would not have been motivated to utilize the Scholz film, which is concerned with antifogging properties at high temperatures and high humidity, on the cold interior surface of the refrigerator door taught by Florentin. If anything, Scholz would be suitably used on the relatively warm exterior surface as opposed to the cold interior surface.

Relating to Scholz in view of Hatekeyama

10) The thickness modification proposed by the examiner would result in a film that is on the order of 50 times thicker than that suggested by Scholz, which is clearly beyond what one of ordinary skill in the art would have found obvious to try. "Obvious to try" has long been held not to constitute obviousness. *In re O'Farrell*, 7 USPQ2d 1673, 1680-81 (Fed. Cir. 1988). A general incentive does not make obvious a particular result, nor does the existence of techniques by which those efforts can be carried out. *In re Deuel*, 34 USPQ2d 1210, 1216 (Fed. Cir. 1995).

14. These arguments are not persuasive. Regarding argument #1. The examiner has acknowledged and continues to acknowledge that Scholz does not explicitly teach the pore size in the wet state as required by the instant claims. However, the examiner maintains that because the coating composition of Scholz is manufactured from identical materials to those disclosed in the instant specification (specifically a PVP film containing TiO_2 particles), the pore size limitation is met. There is nothing in the specification that establishes that the pore size in the wet state limitation arises from anything other than the materials from which the antifrosting coating is made. No processing steps are asserted to result in the claimed pore size.

15. Bearing the above in mind, the applicant is respectfully reminded that it has been held that where claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a *prima facie* case of either anticipation or obviousness has been

established and the burden of proof is *shifted to applicant* to *show* that prior art products do not necessarily on inherently possess characteristics of claimed products where the rejection is based on inherency under 35 USC 102 or on *prima facie* obviousness under 35 USC 103, jointly or alternatively. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, *the applicant* has the burden of showing that they are not." *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the *prime facie* case can be rebutted by ***evidence*** showing that the prior art products do not necessarily possess the characteristics of the claimed product. *In re Best*, 562 F.2d at 1255, 195 USPQ at 433. Merely arguing that the pore size is not taught by the reference does not constitute evidence establishing that the pore size is not necessarily met. Accordingly, this argument is unpersuasive.

16. Regarding argument #2, the examiner maintains that a film can exhibit a pore diameter that is substantially larger than its thickness. A good illustration of this point is a thinly sliced piece of Swiss cheese. While a slice of Swiss cheese generally has minimal thickness, it also has a number of large pores whose diameter (in the plain of the slice) easily surpasses the thickness of the slice. As is clearly shown by this example, the pore diameter of pores in a thin film can be much greater then the thickness of the film. Thus, this argument is unpersuasive.

17. Regarding argument #3, this argument is unpersuasive because Scholz explicitly teaches that the inorganic oxide forms a "network," which is later defined as "a porous, three dimensional structure, preferably formed by an aggregation of colloidal particles

linked together" (column 4, lines 15-17). It is this inorganic oxide "network" that is considered to be equivalent to the applicant's claimed porous absorbent filler. Thus, this argument is unpersuasive.

18. Regarding argument #4, this argument is unpersuasive for two reasons. First, the titanium oxide network taught by Scholz is formed from the same material (TIO_2) that the applicant states on page 6, line 5 of the specification is a mesoporous material. Applicant has not provided any proof that TiO_2 particles are not necessarily mesoporous. As set forth above, a mere argument that something is not necessarily present does not constitute evidence to that effect. Second, the network formed by the TiO_2 particles of Scholz is accurately described as a mesoporous material. Thus, this argument is not persuasive.

19. Regarding argument #5, the examiner notes that 1) Scholz expressly teaches that polyvinyl pyrrolidone is a suitable material for the binder (See column 19, lines 55-65); and 2) The instant claims never require a combination of Polyvinyl pyrrolidone and polyurethane. In fact the instant claims never require a binder made from a combination of polymers. Thus, this argument is moot.

20. Regarding argument #6, the examiner respectfully disagrees. Claim 23 requires "he glazing according to claim 7, wherein the absorbent material is obtained by depositing an orthosilicate hydrolysis condensation product." Claim 7 requires the adsorbent material to be organic ***or*** inorganic. Further, the specification does not define "orthosilicate hydrolysis condensation product" as being necessarily inorganic. Accordingly, as the language has not been more narrowly defined, the language

"orthosilicate hydrolysis condensation product" encompasses both inorganic and organic materials. Thus, this argument is unpersuasive.

21. Regarding argument #7, the examiner strongly disagrees with the applicant's characterization of the film of Scholz as being directed only to an antifogging film for use at high temperature and high humidity. The applicant's argument is based on a piecemeal analysis of the Scholz reference. Specifically, the statement relied on by the applicant to assert that Scholz is directed to films for use at high temperature and high humidity conditions is located at column 1, lines 59-60 of the reference. However, column 1, lines 59-61 states: "In general, fog formation occurs under conditions of high humidity and high temperature **or at interfacial boundaries where there is a large temperature and humidity difference**." Thus it is quite evident that Scholz is not limited strictly to uses at high temperature and high humidity. Thus, thus argument is unpersuasive.

22. Regarding argument #8, the examiner acknowledges that Creasy utilizes a composition that comprises both PVP and PVA, which is considered by the reference to be highly unique. However, it is noted that the binder of Scholz can be comprised of PVP, PVA, other single polymers, or copolymers based on any of these materials (column 19, lines 55-67). Thus, given that the binder of Scholz can be a copolymer of PVP and PVA and the fact that Creasy teaches crosslink the PVP in a similar copolymer to achieve a stronger film without reducing the hydrophilic character of the copolymer, there is clear motivation to make the proposed modification. Thus, this argument is unpersuasive.

23. Regarding argument #9, this argument is based on the same piecemeal analysis of the Scholz reference as asserted in argument #7. Accordingly, the rebuttal of this argument is the same as set forth above for argument #7.

24. Regarding argument #10, the examiner once again acknowledges that there is a great disparity between the thickness suggested in Scholz (0.05-0.25μ) and the thickness suggested by Hatekeyama (1-20μ). Further, the examiner acknowledges that "obvious to try" is an impermissible standard upon which to base an argument of obviousness under 35 U.S.C 103(a) as explicated by *In re O'Farrell*, 7 USPQ2d 1673, 1680-81 (Fed. Cir. 1988). Further, the examiner acknowledges that a general incentive does not make obvious a particular result, nor does the existence of techniques by which those efforts can be carried out. *In re Deuel*, 34 USPQ2d 1210, 1216 (Fed. Cir. 1995).

25. As set forth in *O'Farrell*, the argument that "obvious to try" is not the standard of obviousness under 35 U.S.C 103(a) is directed towards preventing two specific types of error. The first type of error occurs in situations where it is asserted that what would have been "obvious to try" would be to vary all parameters/variables or try numerous possibilities until one potentially arrived at the desired (i.e. claimed) result, where the prior art gives no indication of what parameters are critical or no direction as to which parameters are likely to be successful. *Id.* The second type of error is when what is asserted to be "obvious to try" is to explore a new technology or general approach, though the prior art gives only general guidance as to the form of the claimed invention

or how to achieve it. *Id.* For obviousness under 35 U.S.C 103(a), all that is required is a reasonable expectation of success. *Id.* (citations omitted).

26. The combination of Scholz with Hatekeyama clearly does not fall within the realm of either of the two errors meant to be addressed by the "obvious to try" argument, as there is both suggestion and motivation in the art to make the asserted modification. While there is a great disparity between the suggested thicknesses in each reference, the prior art clearly shows that the thickness controls the properties of the film. Namely, if the film is thin, as suggested in Scholz, it exhibits improved antireflection properties, whereas if the film is thicker, as suggested in Hatekeyama, the film exhibits improved antifogging properties. Further, the asserted modification (to control the thickness of the Scholz film to the thickness suggested in Hatekeyama) does not destroy the teachings of the Scholz reference because Scholz is not only concerned with antireflection properties but also antifogging properties. One of ordinary skill in the art at the time the invention was made, looking at these two references as a whole, would clearly envision controlling the thickness of the film so as to achieve a desired level of antireflection or antifogging, and *would have a reasonable expectation of success in doing so.*

27. Regarding the applicant's "general incentive" argument. The general incentive argument set forth by *In re Deuel* is based on the principal that just because a process for making the claimed invention can be envisioned does not necessarily make the claimed invention obvious. *In re Deuel*, 34 USPQ2d 1210, at 1216. This is particularly true when the hypothetical process is general. *Id.* However, in the instant case the "hypothetical process" (i.e. the modification suggested by the examiner) is not general.

Rather, it is very specific and based on explicit teaching in the art. Specifically, Hatekeyama teaches that by controlling the thickness of a film having substantially the same composition and end use as that of Scholz to the range of 1-20μ, the anti-fogging properties of the film are improved. Thus, this argument is not persuasive.

Conclusion

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nikolas J. Uhlir whose telephone number is 571-272-1517. The examiner can normally be reached on Mon-Fri 7:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul J. Thibodeau can be reached on 571-272-1516. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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